

REMARKS

Applicant wishes to thank the Examiner for reviewing the present application.

Claim Amendments

In view of the restriction requirements being made final by the Examiner, claims 10 and 11 have been cancelled without prejudice.

The Examiner has objected to the claim numbering, pointing out that claim 7 has been listed twice. In the claims originally filed, due to a typographical error, there were placed on file two different claims, both labeled claim 5. To rectify this error, the Applicant has cancelled claims 4 to 13 and re-submitted the cancelled claims as new claims 14 to 20. The Applicant believes that this is the best way to rectify the error. The Applicant submits that new claims 14 to 20 are substantively the same as cancelled claims 4 to 13. Therefore, the Applicant submits that no subject matter has been added by way of the claim amendments.

Claim Rejections – 35 USC § 112

The Examiner has objected to the terms "subsequently" and "periodically" in claim 7. Claim 7 has been cancelled, but corresponds with new claim 16. It is the Examiner's position that it is unclear as to what amount properly constitutes "subsequently" and "periodically", and that therefore these terms render the claim indefinite.

The Applicant respectfully disagrees with the Examiner. It would be clear to a person skilled in the art that the term "subsequently", as used at the beginning of step c) of claim 16 refers to a time subsequent to providing the initial values in step b). The term "subsequently" is defined by the Merriam-Webster dictionary as "following in time, order, or place", and such a definition has been attributed to the word since at least the 15th century. A person skilled in the art reading the claim would clearly understand "subsequently" to be attributed to its normal and common meaning, that is, subsequent to the step that came before it.

Additionally, it would be clear to a person skilled in the art that the term "periodically", as used in step d) of claim 16, refers to sending messages that include the value of the frame counter at time intervals specified "according to predefined criteria", as recited in step d). The term "periodically" is defined by the Merriam-Webster dictionary as "from time to time", and such a word has been commonly used in the English language since at least 1646. The Applicant

submits that a person skilled in the art reading the claim would clearly understand "periodically" to be attributed to its normal and common meaning. Moreover, the Applicant believes that it is not necessary to impose additional limitations on the term "periodically" beyond reciting "according to a predefined criteria". Predefined criteria, as recited in step d), clearly and distinctly specify the intervals of time between sending messages. The Applicant believes that reciting additional limitations on the term "periodically" would unduly limit the claim.

Claim Rejections – 35 USC § 112

Claim 1:

The Examiner has rejected claim 1 as unpatentable over Brightwell (U.S. Patent No. 5,265,103) in view of Fauconnier (U.S Patent No. 6,909,887). It is the Examiner's position that Brightwell discloses all of the subject matter recited in claim 1, except for incrementing the frame counter to an updated value that is congruent to the sequence counter modulo the size of the sequence counter. It is the Examiner's position that this missing teaching is supplied by Fauconnier. The Applicant respectfully disagrees with the Examiner's rejection and traverses the rejection for at least the reasons stated below.

Firstly, the Applicant submits that Brightwell does not teach (or even suggest) the subject matter recited in claim 1, minus the step of incrementing the frame counter to an updated value that is congruent to the sequence counter modulo the size of the sequence counter. For example, Brightwell does not teach or suggest step c) of claim 1, which recites "computing an encoded value of the frame counter by removing from the frame counter a component equal to the value of the sequence counter such that the updated frame counter is uniquely recoverable from said encoded value of the frame counter and said sequence counter". It is the Examiner's position that col. 3 lines 13-26 of Brightwell disclose step c) of claim 1. However, the Applicant disagrees, and in fact, fails to see how this can be possible. The Examiner has not provided any reasoning to support how or why Brightwell teaches or suggests step c) of claim 1.

Brightwell solves a completely different problem from that solved in the present application. Namely, Brightwell teaches a method of coordinating a retransmission sequence between nodes in a network when an error is detected in a frame. As part of the system

disclosed in Brightwell, each node has a frame sequence counter 27, which counts and assigns a sequence number to each frame (col. 3 lines 21-22 of Brightwell). The sequence counter value stored in the node allows the node to "rewind" the transmission sequence when an error is detected (see Fig. 3 of Brightwell).

The Applicant submits that col 3 lines 13-26 of Brightwell do not disclose or even suggest encoding a value of the frame counter by removing a component equal to the value of the sequence counter such that the updated frame counter is uniquely recoverable from said encoded value of the frame counter and said sequence counter. Notably, Brightwell appears only to disclose a frame sequence counter 27, not both a frame counter and a sequence counter as recited in claim 1.

Therefore, it is the Applicant's position that Brightwell does not teach or suggest at least step c) of claim 1. Furthermore, the Applicant believes that Fauconnier also does not teach or suggest step c) of claim 1, and therefore the combined teachings of Brightwell and Fauconnier do not teach or suggest claim 1.

Additionally, it is the Applicant's position that even if Brightwell did disclose all of the subject matter of claim 1, except for incrementing the frame counter to an updated value that is congruent to the sequence counter modulo the size of the sequence counter, as submitted by the Examiner, Fauconnier does not supply this missing teaching because Fauconnier simply teaches communicating the least significant k bits of a binary value representing a time measurement by taking the time measurement modulo 2^k .

It is the Examiner's position that Fauconnier teaches the counting of frames congruent modulo of the sequence counter size, and the Examiner has cited col. 10 lines 25-30 of Fauconnier to support this position. In this passage, Fauconnier discloses user equipment (UE) in a UMTS Terrestrial Radio Access Network (UTRAN) calculating a time offset, i.e., a time difference, between the ciphering sequence number (CSN) of the current serving radio network controller (SRNC) and the system frame number (SFN) broadcasted by the base station (BS) 51, and then taking modulo 2^k of this time difference to communicate only the k least significant bits of the measured time difference (where in the cited passage $k=P=8$). Fauconnier does not teach the counting of frames modulo of the sequence counter size, but only teaches taking the modulo of a time difference in order to communicate the k least significant bits of this time difference. Such a teaching does not suggest incrementing a frame counter to an updated value that is congruent to the sequence counter modulo the size of the sequence counter.

Therefore, although Fauconnier does disclose the calculation of a time difference modulo 2^k in order to communicate the k least significant bits, this does not provide or suggest the teaching of counting frames in a manner such that the updated frame counter value is congruent to a sequence counter modulo the size of the sequence counter, as recited in step b) of claim 1.

Claim 7 (corresponding with new claim 16):

The Examiner has rejected claim 7 as unpatentable over Brightwell (U.S. Patent No. 5,265,103) in view of Fauconnier (U.S. Patent No. 6,909,887). Claim 7 has been cancelled, but corresponds with new claim 16. It is the Examiner's position that Brightwell discloses all of the subject matter recited in claim 16, except for establishing a next value of the frame counter that is congruent to the sequence counter modulo the size of the sequence counter. It is the Examiner's position that this missing teaching is supplied by Fauconnier. The Applicant respectfully disagrees with the Examiner's rejection and traverses the rejection for at least the reasons stated below.

Firstly, the Applicant submits that Brightwell does not teach (or even suggest) the subject matter recited in claim 16, minus the step of establishing a next value of the frame counter that is congruent to the sequence counter modulo the size of the sequence counter. For example, Brightwell does not teach or suggest steps b) and c) of claim 16, that is, initially providing a frame counter and a sequence counter to the recipient (step b), and then subsequently sending messages that include the value of a sequence counter and not the encoded frame counter (step c). As recited in the preamble of claim 16, the frame counter has "a first component representing an encoded frame counter and a second component representing a sequence counter." The Examiner has not pointed out where this subject matter recited in the preamble is provided or suggested by Brightwell (or Fauconnier), and the Applicant submits that this is because such a teaching is not disclosed or suggested by Brightwell or Fauconnier, taken alone or in combination.

The Examiner has cited col. 3 lines 29-35 of Brightwell as teaching step b) of claim 16, that is, "providing initial values representing said frame counter and said sequence counter to said recipient"; however, no such teaching is present in this cited passage, or anywhere in the Brightwell. As was discussed with reference to claim 1, Brightwell appears only to disclose a

frame sequence counter 27, not both a frame counter and a sequence counter.

The Examiner has cited col. 1 lines 46-50 and col. 2 lines 31-32 of Brightwell as teaching step c) of claim 16, that is, "...sending messages including the sequence counter and not the encoded frame counter." However, these cited passages in Brightwell only teach grouping messages into frames and sending frames in a sequence. These cited passages do not teach or suggest sending any sort of counter, let alone including in the message the sequence counter and not the encoded frame counter.

Therefore, it is the Applicant's position that Brightwell does not teach or suggest at least steps b) and c) of claim 16, or the subject matter recited in the preamble of claim 16. Furthermore, the Applicant believes that Fauconnier also does not teach or suggest step b), step c), or the subject matter recited in the preamble of claim 16. Therefore, for at least these reasons, the combined teachings of Brightwell and Fauconnier do not teach or suggest claim 16.

Additionally, It is the Applicant's position that even if Brightwell did disclose all of the subject matter of claim 16, except for establishing a next value of the frame counter that is congruent to the sequence counter modulo the size of the sequence counter, as submitted by the Examiner, Fauconnier does not supply this missing teaching. As discussed in relation to claim 1, although Fauconnier does disclose the calculation of a time difference modulo 2^k in order to communicate the k least significant bits, this does not provide or suggest the teaching of counting frames in a manner such that the next established value of the frame counter is congruent to a sequence counter modulo the size of the sequence counter, as recited in step f) of claim 16.

Dependent claims 2, 3, 5, 6, 8, 9, 12, and 13:

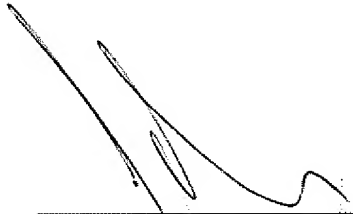
As discussed above, it is the Applicant's position that independent claims 1 and 16 are neither disclosed nor suggested by Brightwell or Fauconnier, considered alone or in combination. Accordingly, the Applicant submits that the associated dependent claims are novel and non-obvious over Brightwell and Fauconnier at least for the reason that they incorporate all the subject matter of either claim 1 or claim 16.

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Summary

In view of the foregoing, the Applicant believes the claims submitted herewith are in condition for allowance. Applicant requests early reconsideration and allowance of the present application.

Respectfully submitted,



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